

FIG.1A

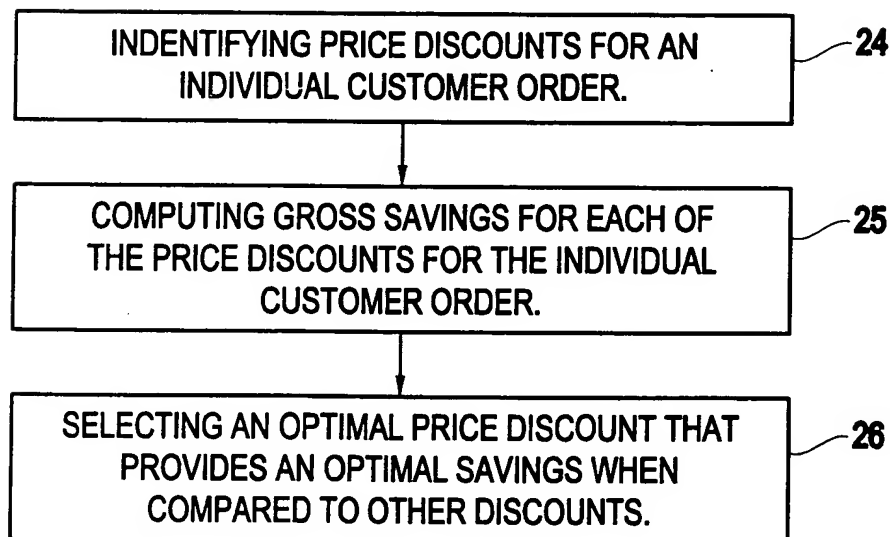


FIG.1B

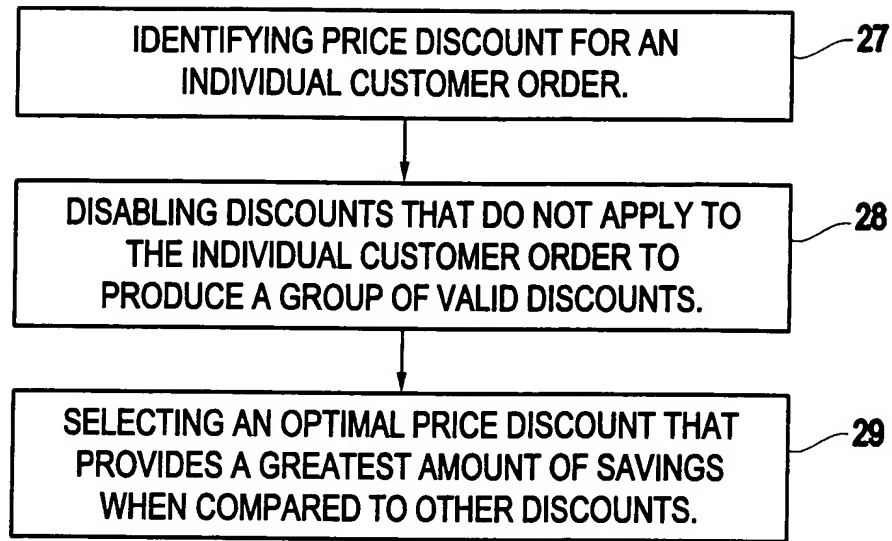


FIG.1C

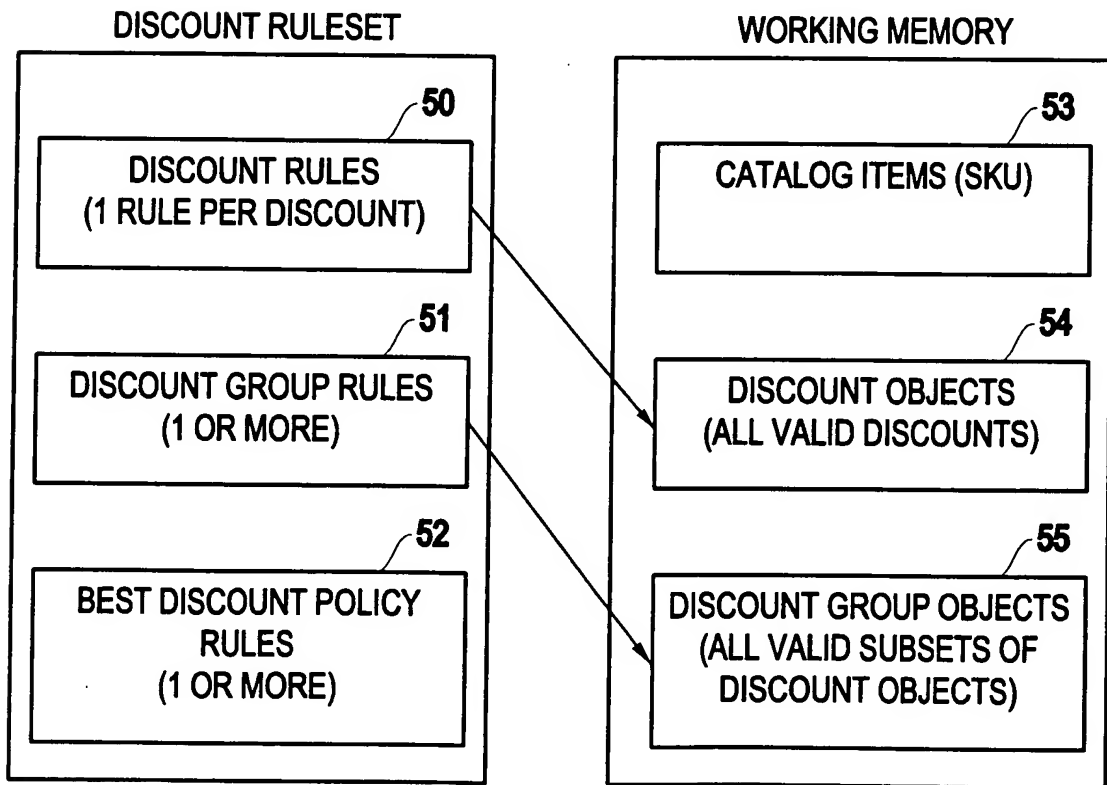


FIG.2

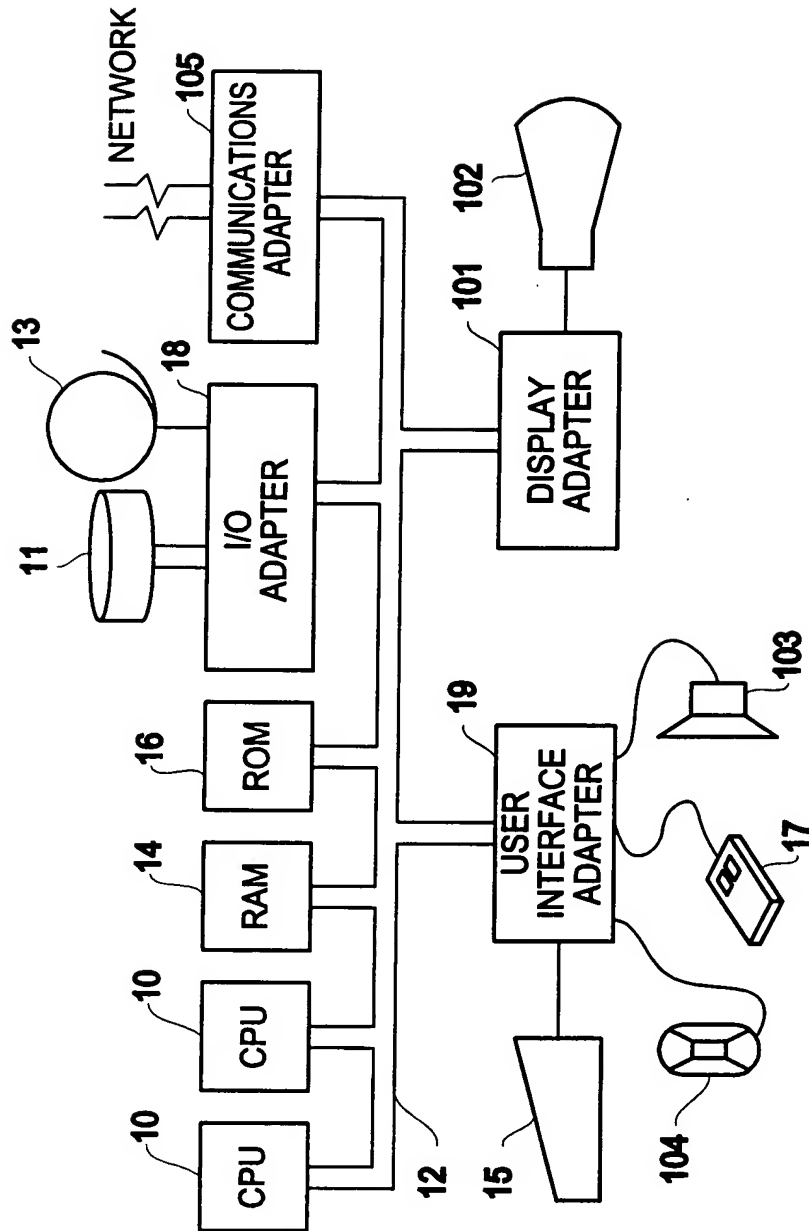


FIG.3

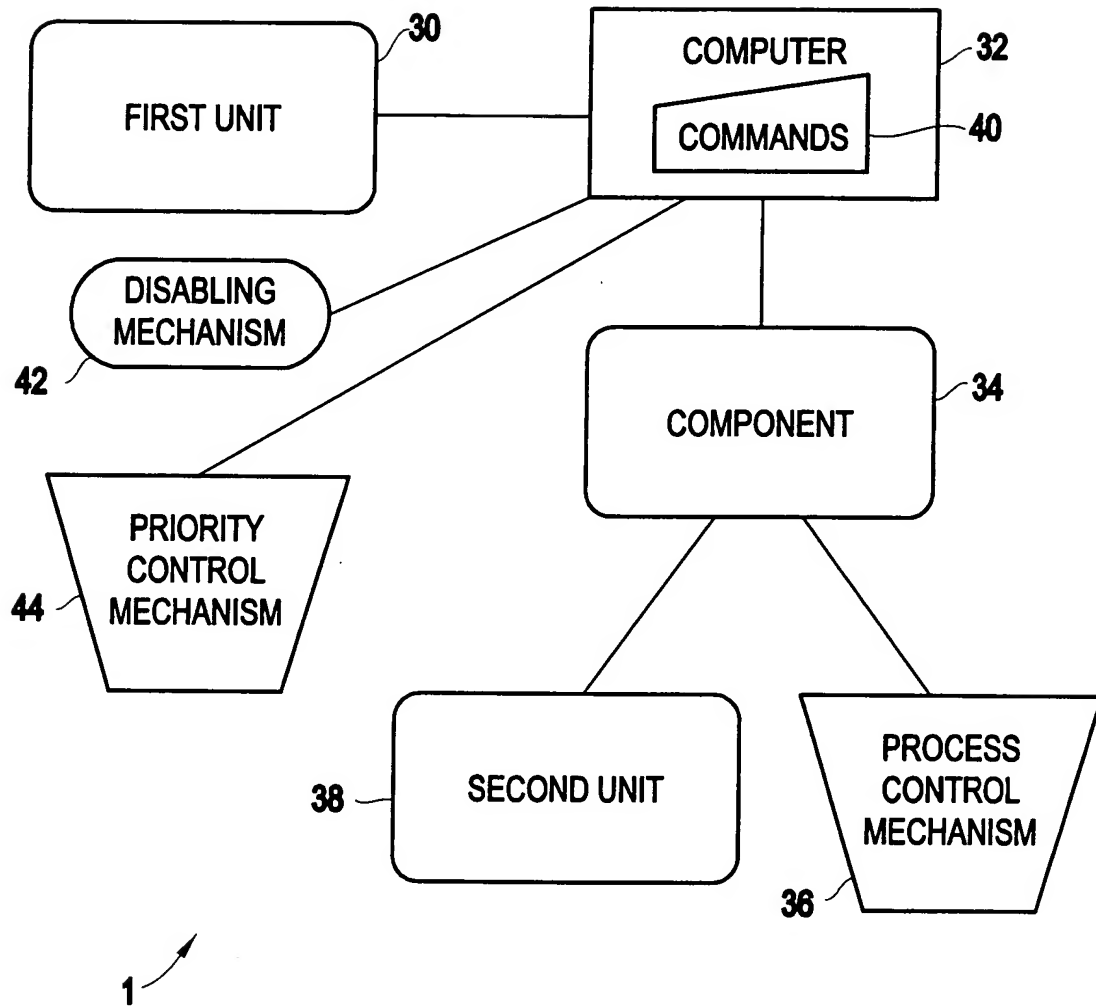


FIG.4

Example Discount Pattern Match Rule

```
Rule_Discount_1[4.0]: when (phase String (phase == "0") &
    item OrderEntry (item.orderid == order.orderid, item.productName == "A") &
    discount Discount! (discount.name == "A")
)
do (newDiscount = createInstance("test.Discount")
    newDiscount.name="A"
    rc = setMember(newDiscount,"type","free-merchandise")
    newDiscount.factor1 = 1.0
    rc = invoke(newDiscount,"applyDiscount",item)
    rc = assert(wm,newDiscount)
    newDiscountGroup = createInstance("test.DiscountGroup")
    rc = invoke(newDiscountGroup,"addDiscount",newDiscount)
    rc = assert(wm,newDiscountGroup)
)
```

FIG.5

Example DiscountGroup Pattern Match Rule

```
Rule_6[4.0]:
when (phase String (phase == "1") &
    discount Discount (discount.discountValue > 0.0) &
    discountGroup DiscountGroup (
        falseValue == invoke(discountGroup,"containsDiscount",discount)
        falseValue == invoke(discountGroup,"containsItems",discount))
    discountGroup2 DiscountGroup !(
        trueValue == invoke(discountGroup2,"containsSameItems",discountGroup,discount)
    )
do (newDiscountGroup = createInstance("test.DiscountGroup")
    rc = invoke(newDiscountGroup,"copyDiscounts",discountGroup)
    rc = invoke(newDiscountGroup,"addDiscount",discount)
    rc = userBreakpoint(this,"adding new discount group to wm")
    rc = assert(wm,newDiscountGroup)
)
```

FIG.6